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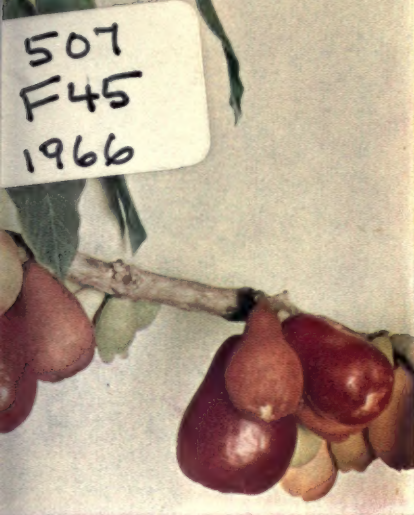
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# Field Museum of Natural History

## 1966 Annual Report







# **Annual Report 1966**



**Field Museum of Natural History**



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THE QUIET, CLASSIC exterior of Field Museum belies the usual hum of activity within. Individuals and families; students and school groups; visiting scientists from throughout the world and graduate students using the research collections; readers in the library; users of the photographic collections and research personnel from industry—these and others brought Field Museum attendance to a 30-year high of almost 1,800,000 in 1966.

While exhibits, educational programs, and research are the ultimate measures of a great science museum, its capacity to produce these “products” for its visitors rests on the museum organization itself: the people, collections, structure, and equipment. If any museum is to avoid mistaking form for substance it must build its strength in this order of priority. These elements of the organization must grow in strength and distinction in an order of magnitude comparable to its program. Thus this report is begun with deep gratitude to the Board of Trustees, Women’s Board, and Members of Field Museum, who, sensitive to the material needs of the institution, worked with the Staff to achieve tangible progress during the year

Though emphasizing the Museum organization, the narrative must begin with an intangible—the return, on March 1, to the well-known name Field Museum of Natural History. In appreciation for the immense contributions made throughout the Museum’s history by the Field family, and with particular recognition of the unparalleled dedication of the late Stanley Field, the Board of Trustees unanimously voted early in the year, to return to the Museum’s earlier name. The response of the community, overwhelmingly favorable, seemed to be composed of almost equal parts of relief and affection. For the Staff, the change dissolved a cloak of anonymity under which it had labored for 23 years.

The Board of Trustees was strengthened by the addition of six new members, elected under the provisions of a change in the by-laws increasing the size of the Board from 21 to 27. Those elected were:

William R. Dickinson, Jr.

Marshall Field

Paul W. Goodrich

Gerald A. Sivage

William G. Swartchild, Jr.

E. Leland Webber

At their request, Trustees William V. Kahler and Walter J. Cummings were elected Honorary Trustees.

Another decision of the Board of Trustees, of signal importance to the strength of the Museum, was the authorization of a Women's Board. Mrs. Hermon Dunlap Smith, an Associate in our Bird Division and a dedicated and loyal volunteer worker for the Museum for many years, was asked to head a committee to form the Board. The affirmative response was most gratifying and was clearly a combination of respect for Ellen Smith and appreciation for Field Museum.

Continued work on a survey of the building in consultation with John Dolio and Associates, Inc. was fruitful in delineating the major requirements for modernization of the Museum. It hardly need be stated that each step forward in the survey added liberal increments to the institution's capital needs, which were of multi-million-dollar dimensions with the survey yet incomplete. Perhaps the most significant, and certainly the most evident, building improvement completed during the year was the cleaning of the north and south entrances—the first cleaning since completion of the Museum in 1921. The removal of 45 years' accumulation of grime produced a dramatic transformation of the building's exterior.

A major reorganization was accomplished in February with the establishment of a centralized Department of Exhibition. Prior to this time, Exhibition personnel had been attached to the respective scientific departments. Their consolidation into a single department was an important step toward accelerating and strengthening the Museum's exhibition program.

As mentioned in last year's report, a Department of Planning and Development was established on January 1 headed by Mr. Robert E. Coburn. During the year, the Department became a going organization and an important factor in our public relations and fund-raising effort.

The financial needs of Field Museum that have been reported with unflagging regularity in the reports of the last several years were discussed with equal regularity at the monthly meetings of the Board of Trustees. Early in the year a Development Committee of the Board was formed, with Mr. Harry O. Bercher as Chairman, to work with the Staff Department of Planning and Development as a means of meeting operating and capital requirements of the Museum. An important first step toward solving operating fund needs was the inauguration of a solicitation program of contributions from corporations. By year's end more than 100 corporations and other business organizations had contributed. Of these, 35 were at a level of \$1,000 or more, which qualified the donors as Corporate Associates of the



Museum. More than \$49,000 was received from this source. Although no formal program of individual solicitation was undertaken, we are gratified that increased support was received from individuals. An organized solicitation of contributions from our Members is planned for 1967. As a condition precedent to this effort, increased effort was aimed at enlarging our Membership, which increased 20% during the year and stood at approximately 12,000 at year end.

The Robert R. McCormick Trust made an extremely generous gift of \$300,000 in support of our exhibition program. We are greatly indebted to the trustees of the McCormick Trust, who have granted in excess of \$500,000 to the Museum during the last four years. Particularly generous gifts were also received from Chicago Daily News Charities Fund, Chicago Sun-Times Charities Fund, Marshall Field & Company, International Harvester Foundation, The Peoples Gas Light & Coke Company, George A. Bates, William H. Mitchell, The Shinner Foundation, Mr. & Mrs. Jack C. Staehle, Mr. & Mrs. William S. Street, Mr. & Mrs. Chester Dudley Tripp, The Chicago Community Trust—John G. and Frances C. Searle Fund, Mr. & Mrs. Edward Byron Smith, and Solomon Byron Smith. The National Science Foundation, National Institutes of Health, U. S. Army, Office of the Surgeon General, and U. S. Navy, Office of Naval Research, contributed significantly to the research funds of the Museum. A full list of individuals and corporations who contributed other than Membership funds during 1966 is carried on pages 30–32.

Field Museum is in a period of transition. What has been accomplished in recent years could not possibly have been done without the generous contributions of individuals and corporations in response to our statements of need for the institution. We have much yet to do. With the continuing help of all who wish nothing less than excellence, Field Museum will continue to move ahead.

## WOMEN'S BOARD

The formation of the Women's Board in May was a notable event for the Museum. Mrs. Hermon Dunlap Smith headed the group charged with the responsibility for establishing the Board, and a group of ladies who had expressed interest in Field Museum and its specialized areas of work were invited to membership. The charter membership of the Board stood at 164 at year end.

A number of very successful events were held during the year, including a sponsorship of the Marshall Field & Company fall fashion



showing, which was made available to the newly formed Board through the courtesy of the company. All costs were absorbed by Marshall Field & Company; thus, the entire proceeds of the benefit were made available, by decision of the Board's officers, to support the Museum's educational program for children.

The interest and enthusiasm of the individual members of the Women's Board have been a stimulation to all of the staff who have had the privilege of working with them.

## SCHOOL PROGRAMS

Use of Field Museum by school groups continued to rise and reached a total attendance figure of 315,000, an increase of 50,000 over the 1965 level. A significant portion of this increase can be directly attributed to various federal school aid programs, principally under the Elementary and Secondary Education Act of 1965, which provide increased opportunity for educational enrichment through field trips. It is unfortunate, however, that no provision has been made in any of these federal programs to assist financially the museums on which the very welcome but nonetheless very real logistic burdens are placed.

Educational programs were presented in great variety and were restricted only by the staff limitations discussed in previous years.

More than 50 different programs were available to school groups without charge on a reservation basis. The diversity of offerings may be seen by a sampling of program titles: Earth and Man, Animal Migrations, How Plants Adapt to Surroundings, Ocean Life of Today, Cave Man to Civilization, Space Geology. More than 60,000 students studied in the museum through these Raymond Foundation programs and hundreds of thousands of others benefited from the portable exhibits circulated to schools by the Harris Extension service.

An excellent six-week summer course in Anthropology was conducted for a group of 25 high ability high school students selected from 200 applicants. Lectures, seminars, field trips, and an archaeological excavation were conducted by a distinguished staff of anthropologists from Field Museum and from outstanding universities. A summer institute in earth sciences was presented to 20 elementary teachers and science consultants. The purpose of the institute was to broaden the teaching competence of the participants and to aid them in assisting in the improvement of science education in their local schools. Laboratory, lecture and field sessions combined to produce a successful six-week program.

For the fifth consecutive year, the Museum collaborated with the American Association for the Advancement of Science in presenting the Holiday Science Lectures to approximately 800 selected science students of the metropolitan Chicago area. Dr. Paul Weiss, Professor of the Rockefeller University, New York, spent two days with the students lecturing on "Living Form, the Nature and Origin of Pattern." The Holiday Science Lectures and the two summer programs were given with assistance from National Science Foundation.



*Taxidermist Carl Cotton, left, explains his work on Members' Night.*

## Special Programs

May 6 saw the largest attendance in the history of Field Museum's Members' Night; some three thousand Members' and friends, attended the evening, which was highlighted by a preview of a special exhibit of Maya stone rubbings in Hall 9 Gallery. They toured the research and preparation areas, as well, seeing such time-honored favorites as the taxidermy laboratory, and viewing current research projects of Museum scientists.

Field Museum played host for the second year to the Showcase of Music Concerts, presented by the University of Indiana School of Music. The Museum Saturday Afternoon Lecture Series, held in the spring and fall, featured a series of lectures and films on nature and travel. The Chicago Area Teachers' Science Association Fair, with prize-winning science exhibits by Chicago and suburban students was held in May. The same month saw Chicago Latin Day, another annual student event. Kennicott Club, the Illinois Orchid Society, the Chicago Shell Club, the Audubon Society and similar groups continued to maintain close relations with the Museum.

*Rubbing from Maya  
Stone Carving*

# A n t h r o p o l o g y



Great as the geographical distances are between anthropological field sites scattered throughout the world, they are often not so staggering as the distances in time along the long span of human existence on this planet. In 1966, Field Museum anthropologists worked in settings as different as the hot, wet island of Guam and the Arizona desert. They studied periods ranging from the Old Stone Age of 30,000 years ago, to the late 19th and early 20th centuries

Dr. Glen Cole, Assistant Curator of Prehistory, carried out archaeological research in Malawi, East Africa, in cooperation with Dr. Desmond Clark of the University of California, Berkeley. They excavated stone tools in stratigraphic context dating from about 30,000 to 20,000 B.C. In addition, they carried out a successful reconnaissance for paleolithic sites in Tanzania, and Dr. Cole made a test excavation at Kalambo Falls, Zambia, in a deposit dating from



35,000 to 25,000 B.C. It is expected that type collections of tools from these different excavations will be added to the Museum's African collections.

Dr. Phillip H. Lewis, Curator of Primitive Art and Melanesian Ethnology, made a month's study trip to examine and photograph New Ireland specimens in German and Swiss museums. Analysis of the data collected will enable him to define the art style areas of this large Melanesian island. He plans to check these conclusions during a field trip to New Ireland in the near future.

Dr. Paul S. Martin, Chief Curator Emeritus, completed a second and final season of excavation at Hay Hollow site, eastern Arizona. This research was supported by a grant from the National Science Foundation. Extraordinary and enthusiastic help was rendered by eight undergraduate students, whose presence was made possible by a grant from the Undergraduate Research Participation Program of the National Science Foundation. The students undertook individual research projects. The goal of the investigations was to determine the social and cultural changes that took place when the people of Hay Hollow site were shifting from a hunting-gathering subsistence to an agricultural base. From carbon 14 determinations, the site dates from about 200 B.C. to A.D. 200.

Dr. Fred Reinman, Assistant Curator of Oceanic Archaeology and Ethnology, completed his archaeological field work on Guam in June. The expedition, supported by the National Science Foundation, located 136 sites and excavated five of these, ranging in time from the beginning of the Christian era to modern times. The remainder of the year was spent at the Museum in analyzing the large quantity of pottery, fishing gear, tools of stone, bone and shell, and food remains recovered from the prehistoric house sites.

During the summer Dr. James W. VanStone, Associate Curator of North American Archaeology and Ethnology, worked on a long range project for the study of culture change during the 19th century among the Indians and Eskimos of southwestern Alaska, particularly the effect of Western impact on these groups. He used archaeological techniques to supplement the available ethnographic and archival data. He excavated a historic Tanaina Indian village on Lake Clark and collected ethnographic data. The work was undertaken with the joint support of the National Museum of Canada and the University of Manitoba. Students from the latter institution assisted. Toward the end of the summer he carried out additional surveys and collected settlement pattern data in the Nushagak River region where he hopes to do additional field work.

There are many gaps in the Museum's ethnographic collections from Africa. In order to fill some of them Leon Siroto, Assistant Curator of African Ethnology, has been encouraging graduate students in anthropology and other persons going to Africa to collect needed material. Useful collections have already been made by Robert Asher of Chicago and William Sytek of the University of Chicago.

Mrs. Christine Danziger, Conservator, expanded the kinds of materials studied and treated in the Conservation Laboratory. The major part of her efforts was devoted to the cleaning and restoration of painted wood carvings and the treatment of leather specimens

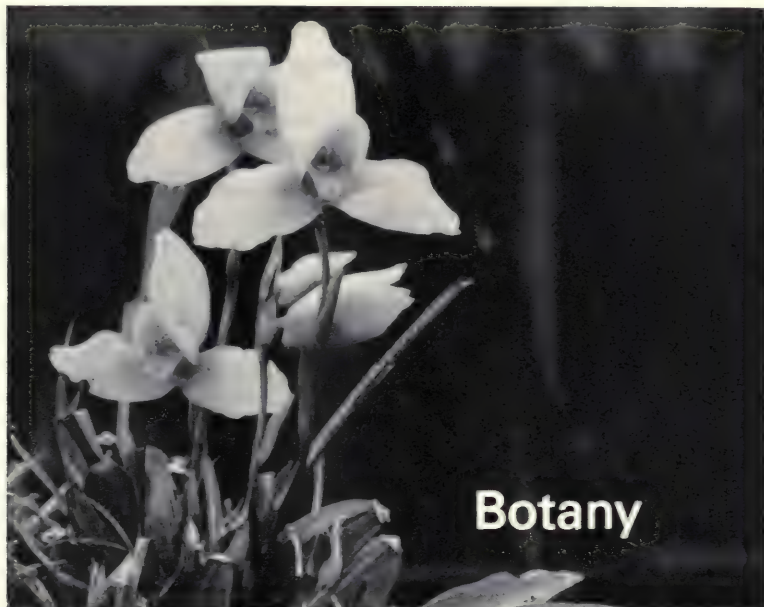
The educational effort of the Department of Anthropology continued at a somewhat accelerated rate. Phillip Lewis and James VanStone were appointed Lecturers in Anthropology at the University of Chicago. Also, at Northwestern University, Lewis gave a course on The Art of Non-literate Peoples. Chief Curator Donald Collier and Kenneth Starr, Curator, Asiatic Archaeology and Ethnology, gave courses at the University of Chicago. Of particular interest was the increase in emphasis on undergraduate work in Anthropology. Dr. Martin's Summer Course in Archaeology was given to eight talented undergraduates, Curators Collier, Starr, Cole and Siroto participated in the Raymond Foundation's Summer Science Course in Anthropology, for Chicago area high school students.



*Stuart Struever, Assistant Professor of Anthropology, Northwestern University, supervised a dig for high school students during a summer course in Anthropology given by the Museum's Raymond Foundation. The dig excavated an Indian village near Flossmoor. Here, Struever examines a hammerstone held by student Theresa Gentry.*



*Lycaste virginalis alba*, the white nun orchid, national flower of Guatemala.



The Museum's long term field and research program in the botany of the new world tropics gained momentum during 1966. Major field work was carried out in Central America and in Peru during the year. Dr. William C. Burger, Assistant Curator of Vascular Plants, Ing. Antonio Molina R., Field Associate, and Dr. Louis O. Williams, Chief Curator, collected in previously little known areas of Nicaragua and Costa Rica. Burger has begun work on an account of the vegetation of Costa Rica, which has not been comprehensively studied for about 30 years.

In 1966 Servicio Forestal y de Caza, of Peru, and Field Museum were engaged in a cooperative research project to study the forests and forest products of Amazonian Peru, a vast region mostly unexplored botanically. The facilities of Servicio Forestal in Peru and the research capabilities of Field Museum in Chicago should make this a productive undertaking. Mr. Donald R. Simpson, who was appointed to the staff as Assistant Curator of Peruvian Botany, Dr. Williams and Mr. Schunke, began field work in this region at Iparia National Forest. Dr. Gabriel Edwin, Assistant Curator of Vascular Plants, also did field work in Peru in connection with his preparation of a study of the Scrophulariaceae for the *Flora of Peru*.

The cooperative studies of the Central American flora carried out by Escuela Agrícola Panamericana (Honduras) and Field Museum have continued to be productive of research materials. Staff and a graduate student were in the field at the beginning and again at the end of the year with Field Assistant Ing. Antonio Molina R.

Dr. Patricio Ponce de León, Assistant Curator of the Cryptogamic Herbarium, completed a monograph on the Geastraceae, a family of fungi. He began similar studies of the Lycoperdaceae, an allied family. Mrs. Dorothy N. Gibson, Custodian of the Herbarium, has completed manuscript accounts of two families for both the *Flora of Peru* and the *Flora of Guatemala*. Mr. Robert G. Stolze, Herbarium Assistant, made a collecting trip to the high Beartooth Mountains in Montana and Wyoming, east of Yellowstone National Park. His collections increase the usefulness of the Museum's representation from the Rocky Mountains region.

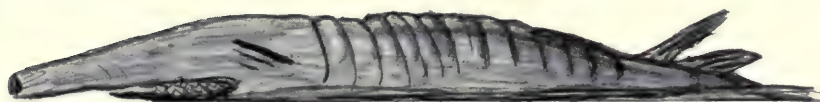
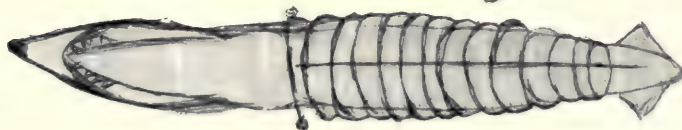
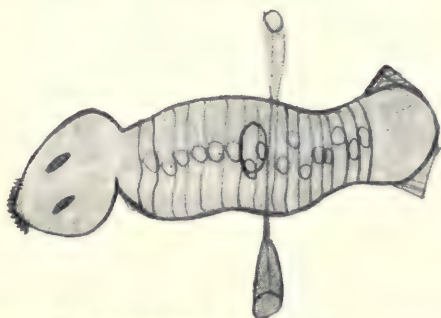
The Museum's botanical field program was highly productive. Nine-five accessions were made during the year, for a total of about 43,000 specimens. Some 23,000 specimens came in from our cooperative Central American program; about 6,000 from the Beartooth Mountains; and almost 400 from the Street Expedition to Afghanistan, the remainder from gifts and exchanges. Original sets of Museum expedition collections are deposited in our herbarium while duplicates are sent to scientific institutions around the world.



*Technician Frank Boryca preparing a plant model for Botany exhibit.*

*These drawings of Tullimonstrum gregarium were done by students at Hyde Park High School from an unillustrated scientific description written by Eugene Richardson, Curator, Fossil Invertebrates. Top view is by Wanda Black, ventral view by Annette Stewart, lateral view by Sheila Fairbanks. The model (bottom) is by Dr. Tibor Perenyi, of the Museum.*

## Geology

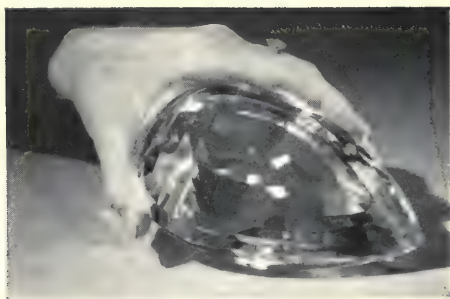


Dr. Robert F. Mueller, Research Associate in Mineralogy, and Dr. Edward J. Olsen, Curator of Mineralogy, have finished three major papers on their meteorite work. They have just undertaken a large project to study diffusion in stone meteorites.

In 1966 Dr. Louis Fuchs of Argonne National Laboratory and Olsen discovered three new minerals in two of the Museum's meteorites. Brianite and panethite were found in the Dayton meteorite and krinovite in the Wichita County meteorite. They have not yet been found as terrestrial minerals. The former two have been completely described and approved by the International Mineralogical Association.

Olsen also identified the amphibole richterite (soda tremolite) in the iron meteorite Wichita County. Amphiboles, which contain combined water, are extremely common in terrestrial rocks, but until





*The Chalmers Topaz, 5,890 carats of blue topaz, cut for the Museum by Walter Kean. It is the world's largest faceted blue topaz.*

now, none has ever been found in a meteorite. This particular occurrence gives information about the environment in which the meteorite was formed and about the abundance of water in primitive solar matter.

In conjunction with a group from Argonne National Laboratory, Olsen published work on the metal-chemical characteristics of ancient copper-based artifacts in the journal *Science*. Using highly sophisticated techniques, they measured impurities in the copper used in making the various artifacts, which ranged from Palestinian battle-axes to Mexican bells and Peruvian tools. The relative proportions of the impurities give clues to the type of ore-source and may ultimately lead to a geographic identification of the ore-sources.

The collection of meteorites, one of the largest, and certainly one of the most useful collections in the world, containing representatives of more than half the known world total of meteorites, was entirely retrayed during the year. The late Mr. Henry Horback relabelled a major part of it. Several large iron meteorites which were badly rusted have been cleaned by the Conservation Laboratory of the Department of Anthropology. From rough material in our mineral collection, a 1400-carat white topaz was cut by Mr. Walter Kean. Thanks to arrangements made by Curator Olsen, a major meteorite exchange was completed with Arizona State University.

Dr. Bertram G. Woodland, Curator of Igneous and Metamorphic Petrology, advanced his study of deformed metamorphic rocks from central Vermont. His particular problem is the microscopic investigation of the orientation of mineral grains in these rock specimens which will give clues to the deformational history of the area. Study of metamorphic rocks from the central Black Hills of South Dakota continued, and metamorphic rocks in the Blue Ridge area of North Carolina have been collected and examined.

Dr. John Clark, Associate Curator of Sedimentary Petrology, extended his study of Oligocene paleogeography from South Dakota into Nebraska and Wyoming. The 1966 field project with Orville L.

Gilpin, Chief Preparator of Fossils, yielded new information and specimens of fossil vertebrates. Clark finished a paper on a new family of extinct insectivorous mammals.

Dr. Eugene S. Richardson, Jr., Curator of Fossil Invertebrates, and Professor Ralph G. Johnson of the University of Chicago, a Research Associate at the Museum, have continued their program of field and laboratory work on the rich fossil fauna of the Coal Age, using specimens collected from strip mines of the Peabody Coal Company, south of Chicago.

Matthew H. Nitecki, Associate Curator of Fossil Invertebrates, has been working on the receptaculitids. He is undertaking a systematic revision of the Middle Paleozoic forms, which are algae, not sponges as is generally assumed. During the summer of 1966, Nitecki did field work in the Ozark region of Missouri and the Mississippi valley region.

Dr. Robert H. Denison, Curator of Fossil Fishes, completed a study of Ordovician vertebrates from western North America, based principally on collections made in 1949, 1964 and 1965. His paper describes the numerous fragmentary remains, considers their growth, and examines the histology of the various hard tissues of their skeletons. During 1966 Denison also finished a description of the earliest known lungfish, specimens of which have been found at the Museum's quarry in the early Devonian rocks of the Bighorn Mountains of Wyoming.

Associate Curator of Fossil Mammals, Dr. William D. Turnbull, continued work on two major studies: one on the mammalian masticatory apparatus and a report on the mammalian tooth remains of the Hamilton Fauna (Late Pliocene) of Australia. Both are near completion. The study of the Hamilton Fauna is a joint project by Curator Turnbull and Dr. E. L. Lundelius, Jr., of the University of Texas. The animals they are describing are an important link in mammalian evolution in Australia. Specimens, however, are few. In 1963-64 Turnbull and Lundelius collected 145 teeth from over three tons of matrix. In order to provide a more adequate sampling of the fauna, they returned to Australia late in 1966 and processed several times the amount of matrix treated in the original trip.

Dr. Rainer Zangerl, Chief Curator of Geology, worked on several Pennsylvanian sharks from the Mecca and Logan Quarry shales of Indiana; in particular, he analyzed the numerous specimens of *Agassizodus*. He also wrote a manuscript on the shell of turtles for the forthcoming *Biology of Reptiles*, Academic Press.



The limpkin, found in Georgia and Florida, as well as Central and South America.

A drawing by  
Douglas Tibbitts  
for Emmet R.  
Blake's Manual  
of Neotropical  
Birds.



## Zoology

Chief Curator Austin L. Rand brought his *Handbook of New Guinea Birds* close to publication and opened a new exhibit on Convergence, showing how different animals—birds in the exhibit—evolve similar structures to deal with similar situations. Rand also finished the section *Nectariniidae* (sunbirds) for a forthcoming volume of Peters' *Checklist of the Birds of the World*.

**DIVISION OF MAMMALS**—Curator Joseph Curtis Moore reported on two genera of Pacific whales to the Eleventh Pacific Science Congress in Tokyo. He completed manuscript on the superfamily of beaked whales for publication in the Museum series *Fieldiana*. Research Curator Philip Hershkovitz neared the end of his book on the marmosets of South America. Associate Jack Fooden, working on macaque monkeys, left for Thailand at the end of the year. For four months he will be in the field investigating macaques in areas where two or more kinds occur together. He will seek evidence of intergradation or hybridization and look for interactions of members of two species meeting naturally in the field. Analysis of data from the W. S. and J. K. Street Expedition to Afghanistan occupied Jerry Hassinger and Hans Neuhauser. Hassinger, a Street Expedition Fellow, and a Thomas J. Dee Fellow of the Museum, has been working on the terrestrial mammals of the area. Neuhauser, also a Thomas J. Dee Fellow, worked on the bats. Both men participated in the expedition in 1965.

**DIVISION OF BIRDS**—The single most important acquisition of the year was a mounted specimen of the Great Auk received from the Institut Royal des Sciences Naturelles, Brussels, in exchange for a suite of North American birds. There are only 78 Great Auk specimens left in the world, and this is only the tenth in North America. It probably came from Eldey Island, Iceland, prior to 1840. For some years in private hands, it passed to the Brussels museum and finally to Chicago. Emmet R. Blake, Curator of Birds, formally launched his research project on the birds of Central and South America, with an assistant from a National Science Foundation grant. The year was spent in intensive work on the more than 500 species of birds which will be covered in the first volume of *The Manual of Neotropical Birds*. Several volumes are expected in the next few years. Associate Curator Melvin A. Traylor completed a study of the evolution of the birds of the Andes Mountains and presented a paper on the subject at the International Ornithological Congress at Oxford. He worked also on the African Sylviidae (Old World Warblers) for Peters' *Checklist of Birds of the World*.

**DIVISION OF AMPHIBIANS AND REPTILES**—Curator Robert F. Inger completed an ecological and taxonomic study of some 33,000 frog specimens from Garamba National Park, Congo. Inger observed and collected in this Congolese National Park, and his field experiences have richly contributed to his forthcoming report on this varied African fauna. Inger left for Washington in September on a year's leave of absence. He was appointed Program Director of Environmental Biology, National Science Foundation. Associate Curator Hymen Marx and Dr. George B. Rabb, Associate Director of Brookfield Zoo and a Research Associate of the Museum, studied the phylogenetic relationships of the poisonous viperine snakes. In another cooperative effort, Mr. Marx and Dr. Konrad Klemmer, of the Senckenberg Museum, Frankfurt-am-Main, are preparing a checklist of the poisonous snakes of the family Elapidae, which includes the cobras, coral snakes and kraits. The cobras, because of their habits, size and proximity to densely populated areas, probably take a higher toll of human life than any other snakes.

**DIVISION OF FISHES**—Curator Loren P. Woods continued revision of the Order Berycoidei for publication in the Sears Foundation Memoir *Fishes of the Western North Atlantic*. The berycoids are primitive, spiny-rayed fish. Additional work on the order involved examining and reporting on collections from the waters off Easter Island in the southeast Pacific and the Maldives in the Indian Ocean.

**DIVISION OF INSECTS**—The most important event of the year was the publication by Field Museum of *Ectoparasites of Panama*, the fruit of a cooperative project supported by U. S. Army Medical Research and Development Command, Office of the Surgeon General. Twenty specialists collaborated in writing the 850-page book which was edited by Curator Rupert Wenzel and Lt. Col. Vernon J. Tipton. It includes 18 papers dealing with the classification, biology and ecology of the mites, ticks, fleas, lice and other blood-sucking external parasites of vertebrates, chiefly mammals, that occur in Panama. The papers are based principally on extensive survey collections made by the Army, U. S. Public Health Service and Gorgas Memorial Laboratory from 1959 to 1962. More than 360 species of parasites are treated. Fifteen new genera and more than 115 new species are described. The book is the most comprehensive treatment of its kind for any tropical country. It will be used to assist in identifying potential disease carriers during bio-medical surveys being conducted along possible routes for a new trans-Isthmian canal. Remarkable progress was made in the processing of collections. A great backlog, however, of unprepared specimens totaling about three-quarters of a million insects remains to be processed. The backlog constitutes perhaps the major problem of the Division, a problem which must be solved if the rich collection resources are to be made available to research workers. The most important acquisition of the year was the Alexander Bierig Collection of over 30 thousand beetles. A small but highly significant exchange shipment of 25 histerid beetles from Dr. O. Kryzhanovskij of the Zoological Institute of Leningrad represents the first exchange of insect research material between Field Museum and the Leningrad Institute.

Photo by Hymen Marx



*The saw-scaled viper, Echis carinatus, is one of the species being used in a study by Dr. George B. Rabb and Mr. Hymen Marx.*



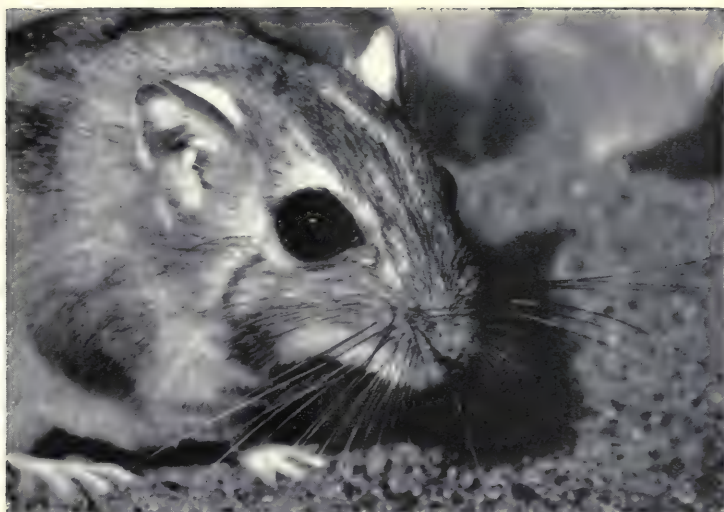


Photo  
by  
Hymen  
Marx

The gentle jird, *Meriones crassus*, is a common Asiatic rodent. It is one of over 100 species of mammals reported on by Douglas Lay in the Museum's forthcoming *Mammals of Iran, a Report of the Street Expedition to Iran*. The Streets have led two expeditions for Field Museum recently, the latest, 1965, to Afghanistan, resulted in a significant increase in our knowledge of animals of this area.

**DIVISION OF LOWER INVERTEBRATES**—Alan Solem, Curator, substantially completed the text for a monograph of Pacific Island endodontid snails. Many things go into the making of a scientific monograph and several assistants were occupied with illustration of shells and soft parts, preparation of charts, mounting, labeling, statistical calculations and so forth. Solem began another long range study, the problems associated with shell reduction in gastropods. Mr. Laurie Price, who has collected for Dr. Solem for some years, spent the Australian spring, from mid-October to mid-December, collecting in Tasmania.

**DIVISION OF VERTEBRATE ANATOMY**—Assistant Curator Karel F. Liem completed his work on the functional morphology of the respiratory mechanisms of the amphibious fish *Monopterus albus*. He found that this Asiatic fish, which can live out of water for indefinite periods in moist land environments, breathes with its skin and the linings of the mouth, gill cavity and esophagus. Even in water, seventy-five per cent of the total oxygen requirement is gathered from the air and only twenty-five from water. Liem also completed functional anatomical studies on the kissing gourami *Helostoma*, and *Luciocephalus pulcher*, another air-breathing Asiatic fish. He began a study of the explosive adaptive radiation of the fish family Cichlidae in Lake Tanganyika.

## Exhibition

As mentioned earlier, an initial step toward a more active exhibition program was taken early in the year with the establishment of a separate Department of Exhibition. Artists, preparators, and technicians previously assigned to one or another of the four scientific departments are now joined in a single force so that their diversified talents and skills may be applied with greater coordination and flexibility in the exhibition program.



*The arrival from South America and subsequent exhibition of the Sierra Sagrada, piloted alone by Francis Brenton, caused considerable stir in Chicago during 1966. These photos show the boat as it came to the Museum. Brenton is at lower right, helping with the exhibit.*

A second preliminary step has been the creation of an Exhibition Committee, charged with over-all planning of a comprehensive, balanced program that best employs the resources of the Museum in providing for all who seek information about the natural world.



Progress was made in two major undertakings begun before consolidation of the exhibition staff; these are the revision of exhibits dealing with Tibet and work toward the completion of the Hall of Useful Plants. However, a large number of special exhibits and events absorbed much of the efforts of the exhibition staff. Some of these were annual events such as the 21st Chicago Exhibition of Nature Photography sponsored by the Chicago Nature Camera Club; the 2nd Annual Chicago Shell Fair sponsored by the Chicago Shell Club; the 16th Annual Amateur Handcrafted Gem and Jewelry Competitive Exhibition sponsored by the Chicago Lapidary Club; drawings and other forms of art work by students of the Junior School of the Art Institute of Chicago; and the all too brief Orchid Show sponsored by the Illinois Orchid Society in November.

An exhibition of paintings and drawings by Abelam and Kilengi people of the Territory of New Guinea obtained by Dr. Philip C. Dark, Research Associate, and Dr. Robert MacLennan, inaugurated the use of the Museum's new special exhibition gallery in Hall 9 on 4 March. It was followed in May by a display of rubbings by Mrs. Merle Smith from Maya stone carvings. An exhibition of floral linoblock prints by Henry Evans, one of bird paintings by Mrs. Florence Guise, based in part on studies of specimens in the Museum's collections, and a display of work by students enrolled in a Summer Art Seminar sponsored by the Chicago Board of Education were others in the series of non-recurring special exhibits. The display in Stanley Field Hall of a catamaran made of two Indian dugout canoes assembled by Francis Brenton and sailed by him from Cartagena, Colombia, to Burnham Harbor in Chicago, created a great deal of public interest. Almost as sudden and unexpected was the opportunity to exhibit the work of Huang Chun-pi and Kao Yi-hung, two of Nationalist China's foremost painters in the classic tradition. Both artists were in attendance during the exhibition from November 10 to 18 and demonstrated their methods of painting on two occasions, one of which was in Simpson Theatre for the general public.

Several displays of recent accessions were exhibited in Stanley Field Hall. These were: a painting by M. Gudin, court painter to King Louis Phillipe of France, portraying a canoe race between Indians and French sailors, which was presented to the Museum by Mrs. A. W. F. Fuller; selected minerals from a collection given by Mr. Glenn Commons; and a huge quartz crystal weighing 350 pounds obtained by purchase. A faceted blue topaz, the Chalmers topaz, weighing 5,890 carats, also obtained by purchase, was placed in a special display case on the south second floor gallery.

## Library



*Two illustrations from Die Säugethiere, The Library received an extremely rare, complete set of this work published from 1775 to 1835.*

In 1966 the Museum Library experienced, more than ever before, the impact of the current emphasis on education and research. This increased pressure was felt, on the one hand, from greater numbers of readers, and on the other from the growing number of newly-acquired books and documents. Expanded research has accelerated the cooperative inter-library loan program. Reading Room attendance increased 21 per cent in 1966, and circulation rose over 38 per cent. Full use of the Library's resources cannot be computed accurately because Reading Room activities do not include statistics of the literature used in the departmental and divisional libraries by staff, visiting colleagues and students. Statistics also fail to reflect many other activities such as the consultation of reference works and the various abstracting and indexing services. With the appointment, in October, 1966, of a full time assistant in the Reading Room, the service has become much more efficient. In addition, the two exhibit cases installed in the Reading Room for displays of special collections enable visitors to see our rare and unusual books, and at the same time serve an important function in the Museum's public relations.

The Library's acquisitions program has been moving at an accelerated pace. During 1966 more than 11,200 books and periodicals were added to the collection.

The usefulness of the card catalog has been extended by the addition of 26,740 cards. The catalog is the key instrument for the retrieval of information from the Library's resources, which were augmented by the addition of 2,900 titles representing 6,100 volumes.

There was most satisfactory progress on the Library's reclassification program, as well. 1,930 title cards corresponding to 4,280 volumes were reclassified. It is expected that this herculean task will be completed within the next few years.

Many gifts from individuals, governments and institutions were received. The most important is an extremely rare set of all seven volumes of *Die Säugethiere in Abbildungen Nach Der Natur* (translated Animal Kingdoms), by J. C. D. von Schreber. These books, published between 1775 and 1835, were given to the Museum by Mrs. Frederick F. Sellers. To all those who have made donations to the Library, and to all those who have contributed by their efforts and interest, the Library wishes to extend its cordial thanks.

## Building Operations

Hall 9 Gallery, designed to house special exhibits and to act as a rest area for visitors, was opened this year. Work on Hall 32, which will house a permanent exhibit on the civilization of Tibet, accelerated. Well-appointed new offices for the Department of Development and Planning, which includes Public Relations and the Women's Board, and for the Raymond Foundation, were designed and completed during the year.

## Public Information Services

Field Museum Press published over 2,000 pages of scientific material in 1966, in fourteen papers and monographs of varying length. Responsible also for the *Bulletin* and a great deal of miscellaneous internal and external printing—brochures, pamphlets and the like—the Press had an active and productive year. The Division of Public Relations, intensifying its efforts to bring the story of Field Museum to the public, saw increased coverage of Museum work and events by the metropolitan press, the wire services, television networks and other media. The Museum Book Store, serving visitors to the Museum and others, added two hundred titles to its stock of natural history books and increased its sales by fourteen per cent. The skilled members of the Divisions of Photography and Motion Pictures added their essential photographic art to the publishing and public relations programs, and continued their important contributions to the research effort of the four scientific departments.



# FIELD MUSEUM OF NATURAL HISTORY

## Comparative Statement of Receipts and Expenditures - Current Funds Years 1966 and 1965

### OPERATING FUND

RECEIPTS	1966	1965
Endowment income—		
From investments in securities . . . . .	\$ 917,002	\$ 835,501
From investments in real estate . . . . .	112,000	112,000
	<u>\$1,029,002</u>	<u>\$ 947,501</u>
Chicago Park District—tax collections . . . . .	374,307	358,663
Annual and sustaining memberships . . . . .	59,244	45,431
Admissions . . . . .	51,406	50,036
Unrestricted contributions and sundry receipts . . .	304,703	276,429
Restricted funds transferred and expended through Operating Fund . . . . .	357,483	817,797
	<u>\$2,176,145</u>	<u>\$2,495,857</u>
EXPENDITURES		
Operating expenses—		
Departmental . . . . .	\$ 850,692	\$ 783,377
General . . . . .	832,791	693,171
Building repairs and alterations . . . . .	234,692	176,266
	<u>\$1,918,175</u>	<u>\$1,652,814</u>
New geology and library facilities . . . . .	\$ 14,053	\$ 509,012
Collections—purchases and expedition costs . . . .	128,243	127,447
Furniture, fixtures and equipment . . . . .	48,194	26,133
Provision for heating plant renewal . . . . .	22,486	22,486
Pension appropriations contributed to pension trust in 1966 (Note) . . . . .	50,000	50,000
Appropriation for building and exhibit moderniza- tion . . . . .		110,000
	<u>\$2,181,151</u>	<u>\$2,497,892</u>
DEFICIT FOR THE YEAR . . . . .	<u>\$ 5,006</u>	<u>\$ 2,035</u>

Note: The Museum converted its group annuity pension plan on December 31, 1966 into a contributory trustee pension plan which provides for liberalized pension benefits. A substantial unfunded past service liability exists under the new plan, but current actuarial estimates hereof are not yet available. In 1966, a contribution of \$150,000 was made to the pension trust to fund a portion of this liability. This amount was made up of \$50,000 withdrawn from unrestricted endowment and \$50,000 appropriated from income in each of the years 1965 and 1966.

CONTINUED ON NEXT PAGE



## N. W. HARRIS PUBLIC SCHOOL EXTENSION

	1966	1965
Income from endowments.....	\$ 54,747	\$ 51,831
Expenditures.....	45,311	43,925
EXCESS OF INCOME OVER EXPENDITURES.....	<u>\$ 9,436</u>	<u>\$ 7,906</u>

## OTHER RESTRICTED FUNDS

### RECEIPTS

From Specific Endowment Fund investments...	\$ 112,256	\$ 106,540
Contributions and grants for specific purposes...	597,000	648,840
Operating Fund provision for heating plant renewal.....	22,486	22,486
Sundry receipts.....		70,169
Gain on sale of restricted fund securities.....	471	1,091
	<u>\$ 732,213</u>	<u>\$ 849,126</u>

### EXPENDITURES

Expended through Operating Fund.....	\$ 357,483	\$ 817,797
Added to endowment fund principal.....	65,000	55,000
	<u>\$ 422,483</u>	<u>\$ 827,797</u>

### EXCESS (DEFICIENCY) OF RECEIPTS OVER

EXPENDITURES.....	<u>\$ 309,730</u>	<u>\$ (23,671)</u>
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## THE BOARD OF TRUSTEES, FIELD MUSEUM OF NATURAL HISTORY:

We have examined the accompanying comparative statement of receipts and expenditures—current funds of the Field Museum of Natural History for the year ended December 31, 1966. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the statement mentioned above presents fairly the receipts and expenditures of the current funds of the Field Museum of Natural History for the year ended December 31, 1966, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ARTHUR YOUNG & COMPANY

March 7, 1967

## Use During 1966 of Income from Special Purpose Endowment Funds

EDWARD E. AYER LECTURE FOUNDATION FUND	
Cost of Museum Lecture Series.....	\$ 5,339
FREDERICK REYNOLDS AND ABBEY KETTLE BABCOCK FUND	
Subsidy to Publication Program.....	2,847
MRS. JOAN A. CHALMERS BEQUEST FUND	
Purchase of specimens.....	6,776
Laboratory equipment and supplies.....	1,926
EMILY CRANE CHADBOURNE ZOOLOGICAL FUND	
Field trips.....	700
CONOVER GAME BIRD FUND	
Purchase of specimens.....	1,610
Expeditions and study trips.....	2,389
THOMAS J. DEE FELLOWSHIP FUND	
Fellowship grants.....	4,536
GROUP INSURANCE FUND*	
Group insurance cost.....	6,568
N. W. HARRIS PUBLIC SCHOOL EXTENSION FUND	
Preparation, care and distribution of exhibits to Chicago schools.....	45,311
LIBRARY FUND†	
Purchase of books and periodicals.....	12,000
JAMES A. NELSON AND ANNA LOUISE RAYMOND PUBLIC SCHOOL AND CHILDREN'S LECTURE FUND	
Subsidy to public school and children's lecture program.....	46,472
MAURICE L. RICHARDSON PALEONTOLOGICAL FUND	
Expeditions, field work, and professional meetings.....	2,939
HOMER E. SARGENT FUND	
Purchase of specimens.....	650
KARL P. SCHMIDT FUND	
Study grant.....	35

These funds have been used in accordance with the stipulations under which they were accepted by the Museum. In addition, the income from more than \$20,000,000 of unrestricted endowment funds was used in general Museum operation.

\* Established by Stanley Field

† Established by Edward E. Ayer, Huntington W. Jackson, Arthur B. Jones, Julius and Augusta N. Rosenwald

## Contributions and Bequests

The gifts of many individuals have built a great museum. Contributions and bequests now and in the future will permit needed improvement of exhibits, expansion of the educational program, and increased support of scientific research. The following form is suggested to those who wish to provide for Field Museum of Natural History in their wills:

### Form of Bequest

I do hereby give and bequeath to Field Museum of Natural History of the City of Chicago, State of Illinois:

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*Cash contributions to Field Museum of Natural History are allowable as deductions in computing net income for federal income tax purposes.*

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# Museum Publications in 1966

## DEPARTMENT OF ANTHROPOLOGY

QUIMBY, GEORGE I.

*The Dumaw Creek Site. A Seventeenth Century Prehistoric Indian Village and Cemetery in Oceana County, Michigan.* Fieldiana: Anthropology, vol. 56, no. 1, 91 pp., 34 illus.

## DEPARTMENT OF BOTANY

STANDLEY, PAUL C., LOUIS O. WILLIAMS and CYRUS LONGWORTH LUNDELL

*Flora of Guatemala.* Fieldiana: Botany, vol. 24, part 8, nos. 1-2, 210 pp., 61 illus.

## DEPARTMENT OF GEOLOGY

DEMAR, ROBERT E.

*Longiscitula Houghae, A New Genus of Dissorophid Amphibian from the Permian of Texas.* Fieldiana: Geology, vol. 16, no. 2, 9 pp., 2 illus.

*The Phylogenetic and Functional Implications of The Armor of The Dissorophidae.* Fieldiana: Geology, vol. 16, no. 3, 34 pp., 9 illus.

DENISON, ROBERT H.

*Cardipeltis: An Early Devonian Agnathan of the Order Heterostraci.* Fieldiana: Geology, vol. 16, no. 4, 28 pp., 11 illus.

KJELLESVIG-WAERING, ERIK N.

*A Revision of the Families and Genera of the Stytonuracea (Eurypterida).* Fieldiana: Geology, vol. 14, no. 9, 29 pp., 4 illus.

OLSON, EVERETT CLAIRE

*Relationships of Diadectes.* Fieldiana: Geology, vol. 14, no. 10, 29 pp., 10 illus.

ZANGERL, RAINER

*A New Shark of the Family Edestidae, Ornithoprion hertwigi From the Pennsylvanian Mecca and Logan Quarry Shales of Indiana.* Fieldiana: Geology, vol. 16, no. 1, 43 pp., 26 illus.

## DEPARTMENT OF ZOOLOGY

DYBAS, HENRY S.

*Evidence for Parthenogenesis in the Featherwing Beetles, with a Taxonomic Review of a New Genus and Eight New Species (Coleoptera: Ptiliidae).* Fieldiana: Zoology, vol. 51, no. 2, 42 pp., 14 illus.

HAAS, FRITZ

*On Some New Non-Marine Mollusks from Colombia and Peru.* Fieldiana: Zoology, vol. 44, no. 25, 11 pp., 10 illus.

INGER, ROBERT F.

*The Systematics and Zoogeography of The Amphibia of Borneo.* Fieldiana: Zoology, vol. 52, 402 pp., 71 illus., 51 tables.

SOLE, ALAN

*The Neotropical Land Snail Genera Labyrinthus and Isomeria (Pulmonata, Camaenidae).* Fieldiana: Zoology, vol. 50, 226 pp., 61 illus., 16 tables.

WAKE, DAVID B. and ARDEN H. BRAME, JR.

*A New Species of Lungless Salamander (Genus Bolitoglossa) from Panama.* Fieldiana: Zoology, vol. 51, no. 1, 10 pp., 5 illus., 1 table.

WENZEL, RUPERT L., and VERNON J. TIPTON, Editors

*Ectoparasites of Panama*. Field Museum of Natural History, Chicago, 1966.  
xii + 861 pp., 93 pls., 154 text figs., 17 tables, 1 map. (With Foreword by  
Lt. Col. Harold D. Newson.) Including the following papers:

Barrera, Alfredo

*New Species of the Genus Amblyopinus Solsky from Panama and Mexico*  
(Coleoptera: Staphylinidae), pp. 281-88, text figs. 31-33.

Brennan, James M. and Conrad E. Yunker

*The Chiggers of Panama (Acarina: Trombiculidae)*, pp. 221-66, text  
figs. 12-30.

Emerson, K. C.

*Mallophaga of the Mammals of Panama*, pp. 267-72.

Fairchild, Graham B.

*Introduction*, pp. 1-8.

*A Checklist of the Hippoboscidae of Panama (Diptera)*, pp. 387-92.

— and Charles O. Handley, Jr.

*Gazetteer of Collecting Localities in Panama*, pp. 9-22, 1 map.

— Glen M. Kohls and Vernon J. Tipton

*The Ticks of Panama (Acarina: Ixodoidea)*, pp. 167-219, tables 4, 5.

Furman, Deane P.

*The Spinturnicid Mites of Panama (Acarina: Spinturnicidae)*, pp. 125-  
66, pls. 37-46.

Guimarães, Lindolpho R.

*Nycteribiid Batflies from Panama (Diptera: Nycteribiidae)*, pp. 393-404,  
text figs. 35-37.

Handley, Jr., Charles O.

*Checklist of the Mammals of Panama*, pp. 753-95.

Herskovitz, Philip

*Mice, Land Bridges and Latin American Faunal Interchange*, pp. 725-  
51, text figs. 151-54.

Strandtmann, Russell W., and Conrad E. Yunker

*The Genus Hirstionyssus Fonseca in Panama (Acarina: Dermanyssidae)*, pp. 105-24, text figs. 4-11.

Tipton, Vernon J., Robert M. Altman and Charles M. Keenan

*Mites of the Subfamily Laelaptinae in Panama (Acarina: Laelaptidae)*,  
pp. 23-82, pls. 1-34, tables 1-3.

— and Eustorgio Méndez

*The Fleas (Siphonaptera) of Panama*, pp. 289-385, pls. 47-93, text  
fig. 34.

Wenzel, Rupert L. and Phyllis T. Johnson

*Checklist of the Sucking Lice of Panama (Anoplura)*, pp. 273-79.

— Alicja Kiewlicz and Vernon J. Tipton

*The Streblid Batflies of Panama (Diptera: Calypterae: Streblidae)*, pp.  
405-675, text figs. 38-146, tables 6-10.

— and Vernon J. Tipton

*Some Relationships between Mammal Hosts and their Ectoparasites*, pp.  
677-723, text figs. 147-50, tables 11-17.

— Vernon J. Tipton and Christina J. Fowler

*Appendix. Classified List of Hosts and Parasites*, pp. 797-823.

Yunker, Conrad E. and Frank J. Radovsky

*The Dermanyssid Mites of Panama (Acarina: Dermanyssidae)*, pp. 83-  
103, text figs. 1-3.

# Field Museum of Natural History Bulletin

VOL. 37, 1966

- DYBAS, HENRY S.  
*Featherwing Beetles*, no. 4, pp. 3-4,  
3 illus.
- EDWIN, GABRIEL  
*Deck the Halls*, no. 12, pp. 7-9, 5 illus.
- FAWCETT, W. PEYTON  
*An Ornament to The Age in Which We  
Live*, no. 11, pp. 3-6, 9 illus.  
*Conrad Gesner*, no. 8, 5 pp., 3 illus.
- HERSHKOVITZ, PHILIP  
*Museum Taxonomy Serves Medical  
Research*, no. 9, pp. 4-7, 7 illus.
- LEWIS, PHILLIP  
*Paintings of New Guinea*, no. 3, pp.  
4-6, 9 illus.
- MARTIN, PAUL  
*Putting Together the Pieces*, no. 6,  
pp. 6-7, 2 illus.
- MARX, HYMEN  
*An Aquatic? Marvel—The Basilisk*,  
no. 5, pp. 11-12, 2 illus.
- OLSEN, EDWARD J.  
*Gems and Minerals*, no. 3, p. 7, 4 illus.
- RAND, AUSTIN L.  
*A New Zoology Exhibit in Which The  
Tongues of Certain Birds Are Used  
to Illustrate the Biological Principle  
of Convergence*, no. 9, pp. 9-11,  
2 illus.  
*Fauna of Southeast Asia*, no. 4, p. 11,  
3 illus.
- The Question of Importance in Zool-  
ogy*, no. 8, pp. 6-7, 1 illus.
- and JERRY D. HASSINGER  
*Afghanistan—Report on Fauna from  
the Street Expedition*, no. 10, pp.  
6-7, 1 illus.
- RICHARDSON, E. S., JR.  
*The Tully Monster*, no. 7, pp. 4-6,  
4 illus.
- SIROTO, LEON  
*Problem Piece: An Axe-Handle from  
Africa*, no. 12, pp. 3-6, 9 illus.
- SOLEMAN, ALAN  
*Sacks of Exotic Dirt*, no. 6, pp. 3-4,  
3 illus.
- WEBBER, E. LELAND  
*Field Museum Again: Name Change  
Honors Field Family*, no. 3, pp. 2-3,  
5 illus.
- WOODLAND, BERTRAM G.  
*Mountain Building II*, no. 1, pp. 3-7,  
3 illus.  
*Mountain Building III*, no. 2, pp. 6-  
10, 5 illus.  
*Mountain Building IV*, no. 4, pp. 5-9  
5 illus.  
*Mountain Building V*, no. 5, 6 pp.,  
6 illus.
- WOODS, LOREN  
*A Voyage of the Anton Bruun*, no. 2,  
3 pp., 3 illus.

## OTHER MUSEUM PUBLICATIONS

*Annual Report 1965: Field Museum of Natural History*, 42 pp., 9 illus.

## Other Publications of Staff Members

### DEPARTMENT OF ANTHROPOLOGY

- COLE, GLEN H.  
*Precision and Definition in African Archaeology*. prepared jointly with J. D. Clark, G. L. Isaac, and M. R. Kleindienst. *South African Archaeological Bulletin* 21, pp. 114-21.
- COLLIER, DONALD  
REVIEW OF *Colombia* (by G. Reichel-Dolmatoff). *American Anthropologist*, vol. 68, pp. 1072-74.  
REVIEW OF *Life, Land and Water in Ancient Peru* (by Paul Kosok). *American Antiquity*, vol. 31, pp. 761-63.

LEGGE, C. C.

*William Diaper: a biographical sketch.* Journal of Pacific History, vol. 1, 1966.

MARTIN, PAUL S.

REVIEW OF *Bat Cave* (by H. W. Dick). Man, vol. 1, no. 2, p. 252.

SIROTO, LEON

REVIEW OF *Peoples of Africa* (James L. Gibbs, editor). Natural History, vol. 75, no. 2, pp. 58-59.

STARR, KENNETH

REVIEW OF *Indian Archaeology Since Independence* (by B. B. Lal). Journal of the American Oriental Society, vol. 86, no. 2, pp. 225-29.

*Rubbings: An Ancient Chinese Art.* Newsletter of the Midwest Chinese Student and Alumni Services, new series, vol. 9, nos. 3-4, pp. 1-3, pls. 1-5.

VANSTONE, JAMES W.

*The Changing Culture of the Snowdrift Chipewyan.* National Museum of Canada, Bulletin 209 (Anthr. Ser. 74).

REVIEW OF *Archeology of the Yakutat Bay Area, Alaska* (by Frederica DeLaguna and others). American Antiquity, vol. 31, no. 4, p. 599.

REVIEW OF *Obshchestvennyĭ stroĭ Eskimosov i Aleutov ot materinskogo roda k sosedskoi obshchine* (by L. A. Fainberg). American Anthropologist, vol. 68, no. 3, pp. 782-83.

## DEPARTMENT OF BOTANY

EDWIN, GABRIEL

*New Species.* Annals of the Missouri Botanical Garden, vol. 53, Dec. 1966.

WILLIAMS, LOUIS O.

*The Agonondras (Opiliaceae) of Mexico and Central America.* Ciencia, vol. 24, nos. 5-6, Feb. 1966.

*Guía bibliográfica sobre fanerógamas de México.* La Hacienda, vol. 61, no. 6. (with A. Robyns) *Hibiscus luteus (Rolfe) and Comb. Nov. (Malvaceae).* Annals of the Missouri Botanical Garden, vol. 53, May 1966.

*A new Hornemanian from Panama.* Brittonia, vol. 18, no. 3, July-Sept. 1966.

*New Plants from South Mexico and Guatemala.* Brittonia, vol. 18, no. 3, July-Sept. 1966.

## DEPARTMENT OF GEOLOGY

CLARK, JOHN

*Status of the generic names Metacodon and Geolabis (Insectivora).* Journal of Paleontology, vol. 40, no. 5, pp. 1248-1251.

DENISON, ROBERT H.

*The origin of the lateral-line system.* American Zoologist, vol. 6, no. 3, pp. 369-70, figs. 1-2.

(with V. J. Gupta) *Devonian fishes from Kashmir, India.* Nature, vol. 211, pp. 177-78, figs. 1-2.

(with W. D. Ian Rolfe) *The supposed fish Pseudodontichthys Skeels, 11962, is the phyllocarid crustacean Dithyrocaris.* Journal of Paleontology, vol. 40, no. 1, pp. 214-15.

NITECKI, MATTHEW H. (with J. Keith Rigby)

*Vintonia doris, a new Mississippian demosponge from Arkansas.* Journal of Paleontology, vol. 40, pp. 1373-78, pl. 173, 2 figs.

"Paleontology" in 1966 ed. of Encyclopaedia Britannica Junior.



OLSEN, EDWARD J.

(with A. M. Friedman, M. Conway, M. Kastner, J. Milsted, D. Metta) *Copper Artifacts: Correlation with Source Types of Copper Ores*, Science, vol. 152, pp. 1504-6.

(with K. Fredriksoon) *Phosphates in Iron and Pallasite Meteorites*, Geochimica et Cosmochimica Acta, vol. 30, pp. 459-70.

*Rocks and Minerals*, Rocks and Minerals Mag., no. 321, June.

(with R. F. Mueller) *Stability of Orthopyroxenes with Respect to Pressure, Temperature, and Composition*. Journal of Geology, vol. 74, pp. 620-25.

Articles on: *Talc, Meteorites, Diamond, Mineral, Pyroxene, Iron Ore, Olivine, Feldspar, Geochemistry, Crystal, Gem*. 1966 ed. Encyclopaedia Britannica Jr.

RICHARDSON, E. S., JR.

(with Ralph G. Johnson) *A remarkable Pennsylvanian fauna from the Mazon Creek Area, Illinois*. Journal of Geology, vol. 74, no. 5, pp. 626-31.

*Animal or Plant? ETC: a Review of General Semantics*, vol. 23 no. 4, pp. 475-78.

ZANGERL, RAINER

(with D. Dwight Davis) Translation of *Phylogenetic Systematics*, by Willi Hennig, University of Illinois Press, Urbana. 263 pp., 69 figs., 1966.

DEPARTMENT OF ZOOLOGY

BLAKE, EMMET R.

Foreword in *The Birds of Guyana* (by Dorothy E. Snyder). Peabody Museum of Natural History, Salem, Massachusetts, pp. 9-10.

BRONGERSMA, L. D., ROBERT F. INGER and HYMEN MARX

*Proposed Use of the Plenary Powers to Conserve the Generic Name Calamaria Bate, 1827, and the Specific Name Calamaria linnaei Schlegel, 1837 (Reptilia, Serpentes)*. Bulletin of Zoological Nomenclature, vol. 22, pp. 303-13.

HERSHKOVITZ, PHILIP

*Catalog of Living Whales*. United States National Museum Bulletin no. 246, viii + 259 pp.

*Comments on the Proposal for Conservation of Pan Oken, 1816, and Panthera Oken, 1816*. The Bulletin of Zoological Nomenclature, vol. 23, parts 2/3, pp. 67-69.

*Comments on the Proposal on Zorilla by Dr. Van Gelder and the Counter Proposal by Dr. China*. The Bulletin of Zoological Nomenclature, vol. 23, parts 2/3, pp. 74-75.

*Comments on the Proposed Suppression of Meles montanus Richardson, 1829, and M. jeffersonii Harlan, 1825*. The Bulletin of Zoological Nomenclature, vol. 22, parts 5/6, pp. 336-39.

*On the Identification of Some Marmosets Family Callithricidae (Primates)*. Mammalia, vol. 30, pp. 327-32.

*On the Status of Procyon brachyurus Wiegmann and P. obscurus Wiegmann*. The Bulletin of Zoological Nomenclature, vol. 25, parts 5/6, p. 338.

REVIEW OF *Evolutionary and Genetic Biology*, vol. 2, John Buettner-Janusch, editor. The American Biology Teacher, vol. 28, no. 7, p. 94.

*South American Swamp and Fossorial Rats of the Scapteromyine Group (Crice-tinae, Muridae) with Comments on the Glans Penis in Murid Taxonomy*. Zeitschrift für Säugetierkunde, vol. 31, pp. 81-149, 42 illus.

*Status of the Black-footed Ferret in Wyoming*. Journal of Mammalogy, vol. 47, pp. 346-47.

*Taxonomic Notes on Tamarins, Genus Saguinus (Callithricidae, Primates), with Descriptions of Four New Forms*. Folia Primatologica, vol. 4, pp. 381-95, 4 illus.

*Whatever Happened to Hairy Man?* Letter to Editor, Science, vol. 153, p. 362.

INGER, ROBERT F.

*Reptile*. Encyclopaedia Britannica, pp. 173-91.

*The Reptiles*. Follett Beginning Science Books, pp. 1-32.

— and BERNARD GREENBERG

*Ecology and Competitive Relations Among Three Species of Frogs (Genus Rana)*.

*Ecology*, vol. 47, pp. 746-59.

— and ALAN E. LEVITON

*The Taxonomic Status of Bornean Snakes of the Genus Pseudorabdion Jan and of the Nominal Genus Idiopholis Mocquard*. Proceedings of the California Academy of Science, vol. 34, pp. 307-14.

LIEM, KAREL F.

*Sex Reversal*. McGraw-Hill Yearbook of Science and Technology, pp. 360-62.

REVIEW OF *The Future of Man* (by P. Teilhard de Chardin). *American Biology Teacher*, vol. 28, pp. 817-18.

LLOYD, MONTE and HENRY S. DYBAS

*The Periodical Cicada Problem I. Population Ecology*. *Evolution*, vol. 20, pp. 133-49.

*The Periodical Cicada Problem II*. *Evolution*, vol. 20, pp. 466-505.

MOORE, JOSEPH CURTIS

*Diagnoses and Distributions of Beaked Whales of the Genus Mesoplodon known from North American Waters*. No. 3, pp. 33-61, 12 figs. Whales, Dolphins and Porpoises (Kenneth S. Norris, editor). University of California Press, 789 pp., illus.

RAND, AUSTIN L.

*A display of the boat-billed Heron*. *The Auk*, vol. 83, no. 2, pp. 304-06, 2 illus.

*Birds of Paradise*. *Animals*, vol. 8, no. 13, pp. 346-55 (with 16 photos by Thomas Gilliard).

*Every Bird is Different from every other Bird. ETC: A Review of General Semantics*, vol. 23, no. 2, pp. 245-49 (reprinted from the *Bulletin*, Nov. 1948).

*In Memoriam: Reuben Myron Strong*. *The Auk*, vol. 83, no. 2, pp. 282-87.

*The Snipe Rediscovered*. *Audubon Magazine*, vol. 68, no. 5, pp. 351-54 (with illustrations by Guy Coheleach).

SOLEM, ALAN

*Land snails of the Genus Amphidromus from Thailand (Mollusca: Pulmonata: Camaenidae)*. Proceedings of the United States National Museum, vol. 117, no. 3519, pp. 615-28, 2 pls., 2 tables.

*Some non-marine mollusks from Thailand, with notes on classification of the Helicarionidae*. *Spolia Zoologica Musei Hauniensis*, Copenhagen, vol. 24, 110 pp., 1 table, 24 figs., 3 pls.

(with Adolf Zilch). *Zum 80 Geburtstag von Fritz Haas*. *Archiv für Molluskenkunde*, vol. 95, pp. 1-2.

TRAYLOR, MELVIN A.

*The Race of Acrocephalus rufescens in Zambia*. *Bulletin of the British Ornithologists' Club*, vol. 86, pp. 161-62.

*Relationships in the Combassous (Sub-Genus Hypochera)*. *Ostrich*, supplement 6, Proceedings of the Second Pan-African Ornithological Congress, pp. 57-74.

REVIEW OF *A Revised Check List of African Non-Passerine Birds* (by C. M. N. White). *The Auk*, vol. 83, pp. 492-93.

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